What is claimed is:

1. A driver circuit for a semiconductor laser for driving a semiconductor laser in accordance with a data signal including data generated in bursts, comprising:

first bias current supply means for generating, at least at a time of non-output of data, a first bias current for driving the semiconductor laser in a predetermined area within a spontaneous emission area, to supply said first bias current to the semiconductor laser;

signal processing means for generating a pulse current control signal in which the data signal is delayed, using only said data signal, and generating a second bias current control signal that rises more rapidly by a predetermined time than the rise of burst data included in said pulse current control signal;

pulse current supply means for generating a pulse current in accordance with the pulse current control signal generated in said signal processing means, to supply said pulse current to the semiconductor laser; and

second bias current supply means for generating a second bias current for driving the semiconductor laser in a predetermined area within the spontaneous emission area in accordance with the second bias current control signal generated in said signal processing means, to supply said second bias current to the semiconductor laser.

2. A driver circuit for a semiconductor laser according to claim 1, wherein said first bias current supply means includes a temperature compensation section for changing said first bias current corresponding to characteristic changes in the semiconductor laser due to temperature changes.

3. A driver circuit for a semiconductor laser according to claim 2, wherein

said temperature compensation section has a thermistor with a resistance value being changed with temperature fluctuations.

4. A driver circuit for a semiconductor laser according to claim 1, further comprising:

optical output detection means for detecting the power of light output from the semiconductor laser; and

first bias current control means for feedback controlling an operation of said first bias current supply means so that the optical output power from the

semiconductor laser at the time of non-output of data becomes a constant level, based on a detection result of said optical output detection means.

5. A driver circuit for a semiconductor laser according to claim 1, wherein said second bias current supply means has a differential amplification type circuit structure.

6. A driver circuit for a semiconductor laser according to claim 1, wherein said second bias current supply means includes a temperature compensation section for changing said second bias current corresponding to characteristic changes in the semiconductor laser due to temperature changes.

7. A driver circuit for a semiconductor laser according to claim 6, wherein said temperature compensation section has a thermistor with a resistance value being changed with temperature fluctuations.

8. A driver circuit for a semiconductor laser according to claim 1, wherein said signal processing means generates said second bias current control signal which rises more rapidly, by a time corresponding to a predetermined bit number or a predetermined byte number, than the rise of burst data included in said pulse current control signal.

9. A driver circuit for a semiconductor laser according to claim 8, wherein said signal processing means generates said second bias current control signal which is maintained at a high level over at least a predetermined period of the beginning side of the burst data generation period.

10. A driver circuit for a semiconductor laser according to claim 1, wherein said first bias current supply means has a circuit structure the same as for said second bias current control means, and generates said first bias current in accordance with a signal obtained by inverting the second bias current control signal generated by said signal processing section.

11. A driver circuit for a semiconductor laser according to claim 1, wherein when a rise time of said second bias current is shorter than a time corresponding to 1 bit length of burst data,

said signal processing means comprises a delay section for delaying said data signal by a predetermined time, and a logical sum operation section for obtaining a logical sum of an output signal from said delay section and said data signal, and outputs the output signal from said delay section as the pulse current control signal, and outputs an output signal from said logical sum operation section as the second bias current control signal.

12. A driver circuit for a semiconductor laser according to claim 1, wherein

when the rise time of said second bias current is shorter than a time corresponding to 1 bit length of burst data, and also said second bias current is sufficiently larger than said pulse current,

said signal processing section comprises a delay section for delaying said data signal by a predetermined time, and outputs an output signal from said delay section as the pulse current control signal, and outputs said data signal as the second bias current control signal.

13. A driving method for a semiconductor laser for driving a semiconductor laser in accordance with data signals including data generated in bursts, comprising the steps of:

generating, at least at a time of non-output of data, a first bias current for driving the semiconductor laser in a predetermined area within a spontaneous emission area, to supply said first bias current to the semiconductor laser;

generating a pulse current control signal in which said data signal is delayed, using only said data signal, and generating a second bias current control signal that rises more rapidly by a predetermined time than the rise of burst data included in said pulse current control signal;

generating a pulse current in accordance with said pulse current control signal, to supply said pulse current to the semiconductor laser; and

generating a second bias current for driving the semiconductor laser in a predetermined area within the spontaneous emission area in accordance with said second bias current control signal, to supply said second bias current to the semiconductor laser.